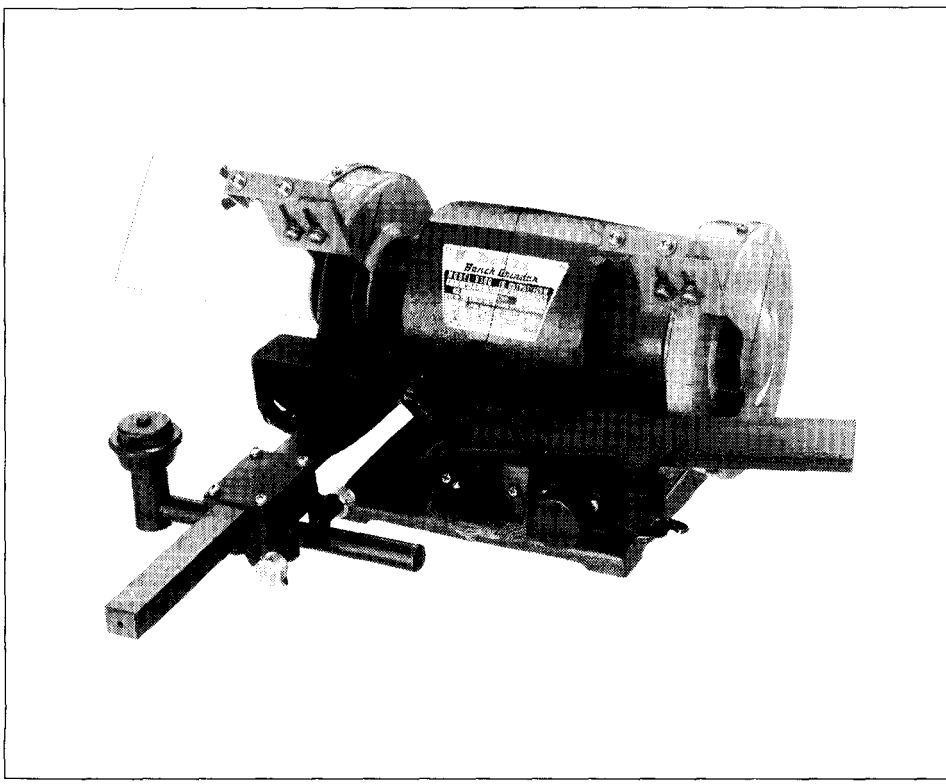
アメリカ

Bench Grinder

125 mm (5") MODEL 9300

INSTRUCTION MANUAL



SPECIFICATIONS

Wheel size	Hz	No load speed	Overall length	Net weight
125 mm (5") x 13 mm (1/2") 125 mm (5") x 3.4 mm (1/8")	60	3,600 R/min.	278 mm (10-7/8")	12 kg (26.4 lbs)

* Manufacturer reserves the right to change specifications without notice.
* Note: Specifications may differ from country to country.

For Your Own Safety Read Instruction Manual Before Operating BENCH GRINDER

GENERAL SAFETY PRECAUTIONS

(For All Tools)

1. KNOW YOUR POWER TOOL. Read the owner's manual carefully. Learn the tools applications and limitations, as well as the specific potential hazards peculiar to it.
2. KEEP GUARDS IN PLACE and in working order.
3. REMOVE ADJUSTING KEYS AND WRENCHES. Form habit of checking to see that keys and adjusting wrenches are removed from tool before turning it on.
4. KEEP WORK AREA CLEAN. Cluttered areas and benches invite accidents.
5. DON'T USE IN DANGEROUS ENVIRONMENT. Don't use power tools in damp or wet locations, or expose them to rain. Keep work area well lighted.
6. KEEP CHILDREN AWAY. All visitors should be kept safe distance from work area.
7. MAKE WORKSHOP KID PROOF with padlocks, master switches, or by removing starter keys.
8. DON'T FORCE TOOL. It will do the job better and safer at the rate for which it was designed.
9. USE RIGHT TOOL. Don't force tool or attachment to do a job for which it was not designed.
10. WEAR PROPER APPAREL. Wear no loose clothing, gloves, neckties, rings, bracelets, or other jewelry which may get caught in moving parts. Nonslip footwear is recommended. Wear protective hair covering to contain long hair.
11. ALWAYS USE SAFETY GLASSES. Also use face or dust mask if cutting operation is dusty. Everyday eyeglasses only have impact resistant lenses, they are NOT safety glasses.
12. SECURE WORK. Use clamps or a vise to hold work when practical. It's safer than using your hand and it frees both hands to operate tool.
13. DON'T OVERREACH. Keep proper footing and balance at all times.
14. MAINTAIN TOOLS WITH CARE. Keep tools sharp and clean for best and safest performance. Follow instructions for lubricating and changing accessories.
15. DISCONNECT TOOLS before servicing; when changing accessories such as blades, bits, cutters, and the like.
16. REDUCE THE RISK OF UNINTENTIONAL STARTING. Make sure switch is in off position before plugging in.

17. USE RECOMMENDED ACCESSORIES. Consult the owner's manual for recommended accessories. The use of improper accessories may cause risk of injury to persons.
18. NEVER STAND ON TOOL. Serious injury could occur if the tool is tipped or if the cutting tool is accidentally contacted.
19. CHECK DAMAGED PARTS. Before further use of the tool, a guard or other part that is damaged should be carefully checked to determine that it will operate properly and perform its intended function — check for alignment of moving parts, binding of moving parts, breakage of parts, mounting, and any other conditions that may affect its operation. A guard or other part that is damaged should be properly repaired or replaced.
20. DIRECTION OF FEED. Feed work into a blade or cutter against the direction of rotation of the blade or cutter only.
21. NEVER LEAVE TOOL RUNNING UNATTENDED. TURN POWER OFF. Don't leave tool until it comes to a complete stop.
22. PROPER GROUNDING. This tool should be grounded while in use to protect the operator from electric shock.
23. EXTENSION CORDS: Use only three-wire extension cords which have three-prong grounding-type plugs and three-pole receptacles which accept the tool's plug. Replace or repair damaged or worn cord immediately.

VOLTAGE WARNING: Before connecting the tool to a power source (receptacle, outlet, etc.) be sure the voltage supplied is the same as that specified on the nameplate of the tool. A power source with voltage greater than that specified for the tool can result in SERIOUS INJURY to the user — as well as damage to the tool. If in doubt, DO NOT PLUG IN THE TOOL. Using a power source with voltage less than the nameplate rating is harmful to the motor.

GROUNDING INSTRUCTIONS

ALL GROUNDED, CORD-CONNECTED TOOLS: In the event of a malfunction or breakdown, grounding provides a path of least resistance for electric current to reduce the risk of electric shock. This tool is equipped with an electric cord having an equipment-grounding conductor and a grounding plug. The plug must be plugged into a matching outlet that is properly installed and grounded in accordance with all local codes and ordinances.

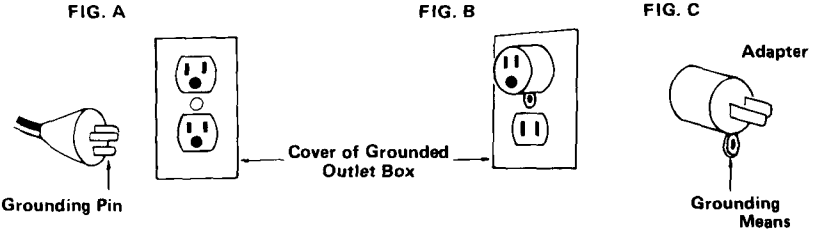
Do not modify the plug provided – if it will not fit the outlet, have the proper outlet installed by a qualified electrician.

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. The conductor with insulation having an outer surface that is green with or without yellow stripes is the equipment-grounding conductor. If repair or replacement of the electric cord or plug is necessary, do not connect the equipment-grounding conductor to a live terminal.

Check with a qualified electrician or serviceman if the grounding instructions are not completely understood, or if in doubt as to whether the tool is properly grounded.

Grounded, cord-connected tools intended for use on a supply circuit having a nominal rating less than 150 volts: This tool is intended for use on a circuit that has an outlet that looks like the one illustrated in Figure A. The tool has a grounding plug that looks like the plug illustrated in Figure A. A Temporary adapter, which looks like the adapter illustrated in Figure B and C, may be used to connect this plug to a 2-pole receptacle as shown in Figure B if a properly grounded outlet is not available. The temporary adapter should be used only until a properly grounded outlet can be installed by a qualified electrician. The green-colored rigid ear, lug, etc. extending from the adapter must be connected to a permanent ground such as a properly grounded outlet box.

GROUNDING METHODS



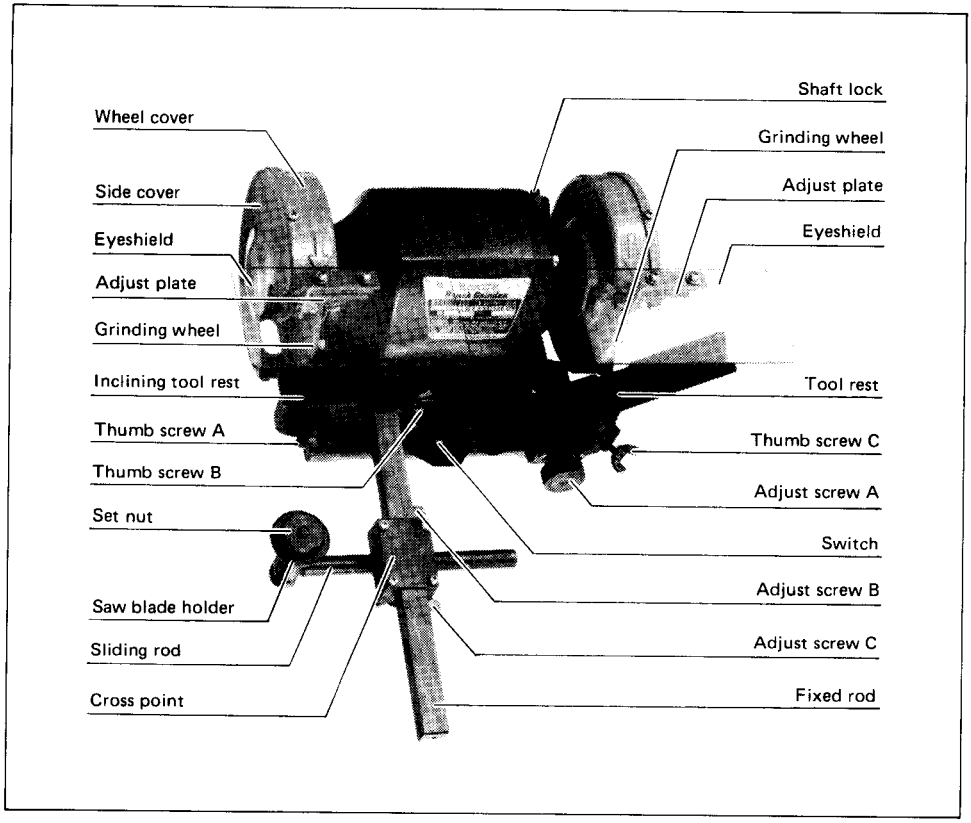
ADDITIONAL SAFETY RULES FOR BENCH GRINDER

1. Be sure that the guards are in place to protect the operator against flying debris and injury in case the wheel breaks.
2. Check the wheel for cracks and chipped edges before mounting and/or running it. Stand away from the front of the wheel and run for more than one minute to test it. Replace if you note anything abnormal. Then test new wheel for more than 3 minutes.
3. Use only the face of a straight wheel and the side of a cup wheel when grinding. Avoid sudden feeds of work into wheel to minimize the possibility of cracks or breakage.
4. Do not strike or drop the wheel. Use only the shaft, flanges, nuts and other installing parts specified by Makita. Handle them carefully and remove any foreign matter adhering to them.
5. Always wear safety goggles when grinding. Also wear a face mask if there is much dust.
6. Stand aside and let wheel come up to full speed after switching on, before you start to use the grinder.
7. Stop work and switch off immediately whenever the wheel stops or emits a strange noise during operation.
8. Metal grinding creates sparks. Keep the area around the grinder free of anything ignitable: oil, gas, glue, bond, paint, etc.
9. Replace cracked, chipped or damaged wheels immediately. Install carefully in accordance with the instruction manual.
10. Use only wheels of specified dimensions indicated on the bench grinder label. The inside and outside of the grinding wheel (flange contacting portions) should have a label, or the wheel should not be used. Use only a grinding wheel with a maximum safe speed over the maximum wheel speed stated on the bench grinder. Use only a wheel with the hole size that fits the tool shaft. *Arbor size 12.7 mm (1/2'').
    Do not attempt to enlarge the hole size or use bushings to compensate for a loose fit. Never use the grinder with a loose grinding wheel.
11. Be sure the wheel you intend to mount as a replacement has no cracks, chipped areas or defects. Mount wheel on a rod or pencil through arbor hole and tap side lightly with a wooden handle or piece of wood. If it rings clear when tapped at several places when the wheel is rotated, the wheel can be used.
12. If nut is loose, running the wheel can be extremely dangerous. On the other hand, a wheel that is tightened too much can be damaged and thus be a danger. Use the standard equipped wrenches and secure in accordance with the instruction manual procedure.
13. Do not let your fingers or clothing become caught in a revolving wheel. Also, do not leave a bench grinder running unattended.

14. Adjust tool rests so they are within 1 mm (1/32") – 3 mm (1/8") of the grinding wheel. Height of tool rests should be so that are level with the middle (center) of the wheels.
15. Always keep the clearance between the face of a straight wheel and the adjust plate less than 1.6 mm (1/16"). With a cup wheel, the adjust cover should be within 1 mm (1/32") – 3 mm (1/8") from the wheel surface. This will prevent bodily harm should the wheel fly apart and or something become caught inside.
16. For safe use, keep the standard-equipped eyeshields in position at all times.
17. Before switching on the grinder, turn the grinding wheel by hand to make sure it is not contacting the work or tool rest.
18. Be very careful how you attach or remove work from the tool rests and also where you set the work.
19. Unplug the tool and hold by means of the base when carrying.
20. Replace cracked wheel immediately.
21. Always use guards and eye shields.
22. Do not overtighten wheel nut.
23. Use only flanges furnished with the grinder.
24. Adjust distance between wheel and work rest to maintain 1/8 inch or less separation as the diameter of the wheel decreases with use.
25. Frequently clean grinding dust from beneath grinder.

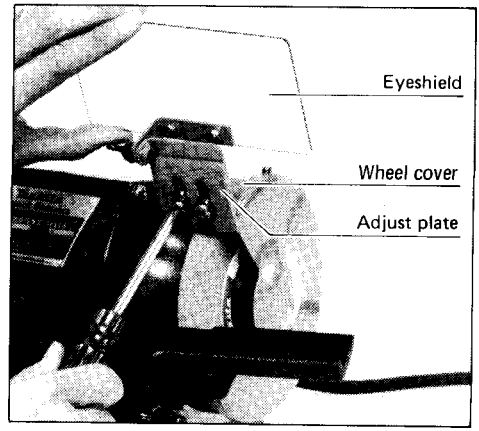
SAVE THESE INSTRUCTIONS.

NAMES OF PARTS



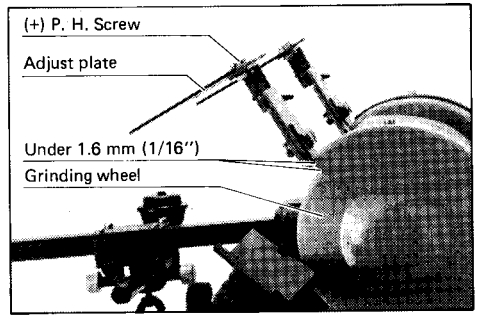
BEFORE USE

1. The eyeshields are packed together with the bench grinder. Always install the eyeshields before operation (see explanatory figure).
2. Fit eyeshields in between wheel cover and adjust plate (fitting small screws into installation holes on eyeshields). Secure tightly with P. H. screws.



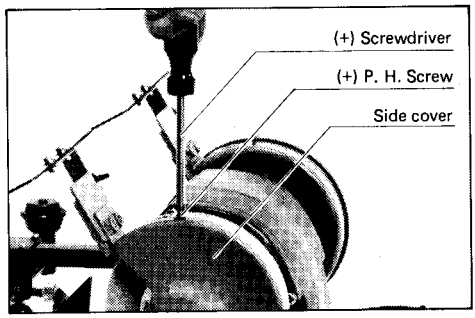
HOW TO USE

Keep the space between the adjust plate and grinding wheel under 1.6 mm (1/16"). Screw in securely the (+) P. H. screws as soon as you have adjusted the adjust plate.

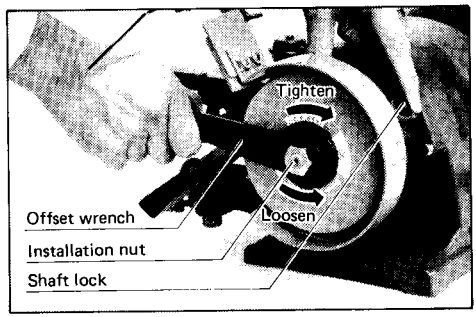


Installing and removing the grinding wheel

1. Use a (+) screwdriver to remove the (+) P. H. screws from the side cover.

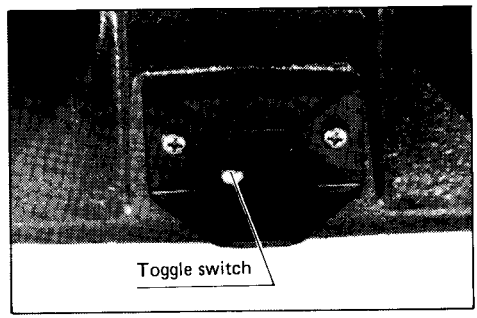


2. To remove the grinding wheel, hold the shaft lock, then turn the installation nut in the direction of wheel revolution. After installing the grinding wheel, always reinstall the side cover.



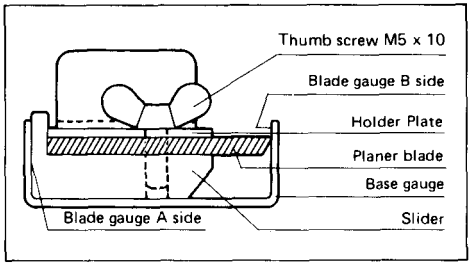
Switch action

Flick the toggle switch to the ON side to put the grinder on; pull to OFF side to put it off.

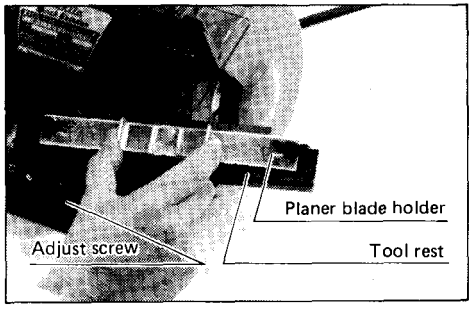


Sharpening planer blade

1. How to fit planer blade holder set
   In the case of fitting the planer blade to the slider, two thumb screws of planer blade holder should be tightened so that the slider should always be contacted closely with the blade gauge A side, and the edge of blade should be contacted with its gauge B side.



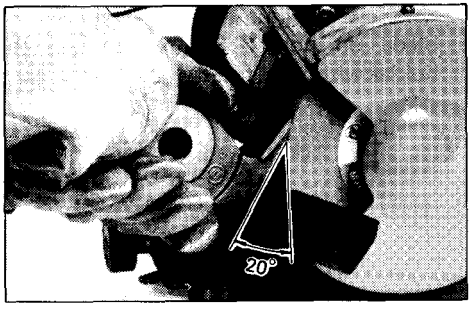
2. Mount the planer blade holder on the tool rest and sharpen the blade gradually but rather quickly, moving it back and forth across the face of the wheel.



3. To adjust the fine adjustment slide, use the adjust screw. Keep the tool rest at the same angle as the grinding wheel during operation.

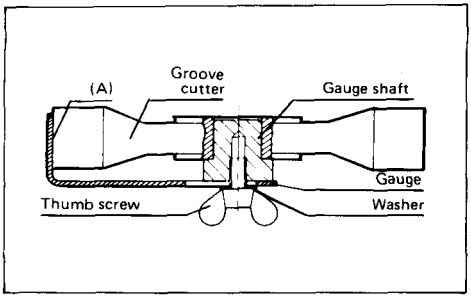
Groove cutter sharpening

Place the groove cutter on the tool rest at an appropriate angle (about 20°) and grind using both hands to hold it.



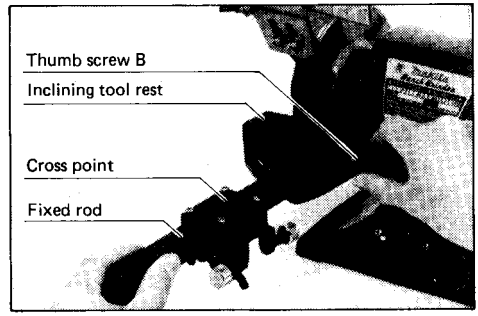
How to use the groove cutter gauge assembly

Fit the groove cutter onto the gauge shaft with one cutter edge flush with the side of the guide (A), fastening it by the thumb screw. Then, with the guide held in place, turn the cutter until the other edge comes flush with the side of the guide (A). Make sure that both are equidistant from the middle of the cutter.

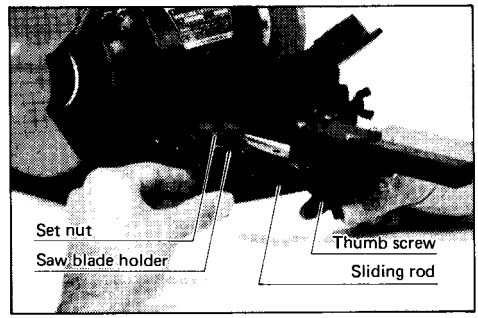


Assembling circular saw sharpening kit

1. First install fixed rod with cross point into hole in the inclining tool rest. Secure with thumb screw B so that screw end fits into indentation on the rod.

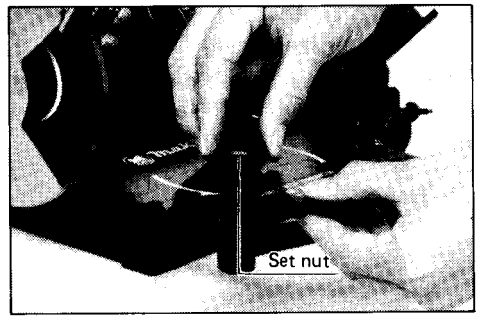


2. Now slide rod for mounting saw blade holder and set nut into hole below on cross point. Secure with thumb screw. Note flat side of rod should be on the bottom.
   Set blade holder for circular saw into hole for it on sliding rod. Then set nut screws into the blade holder hole.

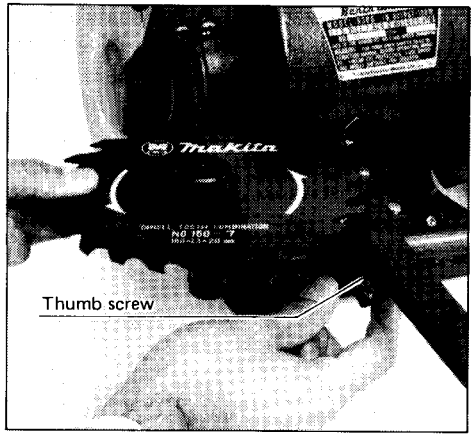


Actual sharpening procedure

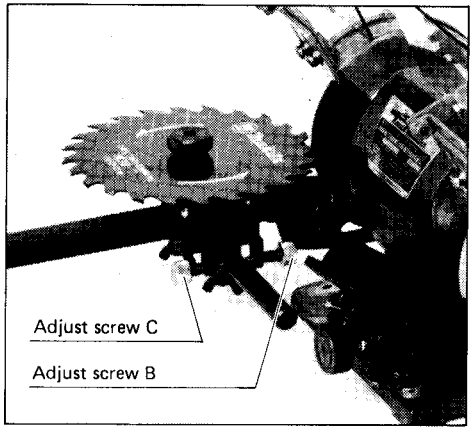
1. Unscrew set nut and set circular saw blade on holder. Secure carefully to holder with the set nut.



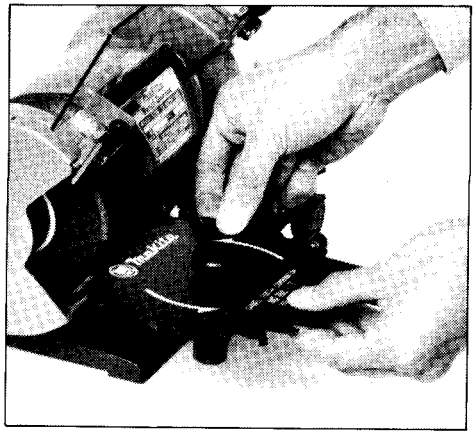
2. Loosen thumb screws and move blade in closer to the grinding wheel. Make sure blade lies flat on top of the inclining tool rest. Secure thumb screws.



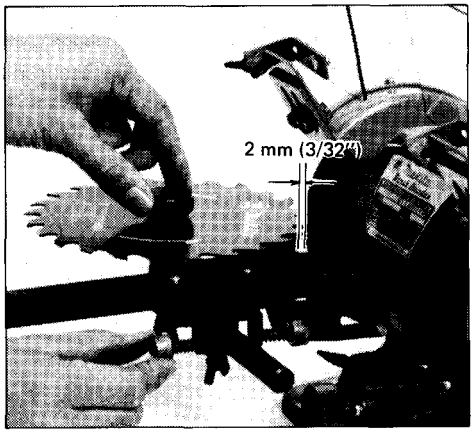
3. Using the two adjust screws (B, C) on the right side, work the sliding rod sideways until the tip of the saw blade just contacts the side of the grinding wheel. Secure blade with adjust screws so that uniform stock (teeth tips) removal will result.



3. Rotate the saw blade in clockwise direction after switching on the tool, cutting blade teeth to uniform height. This jointing step evens up the circumference of the blade . Switch off grinder.



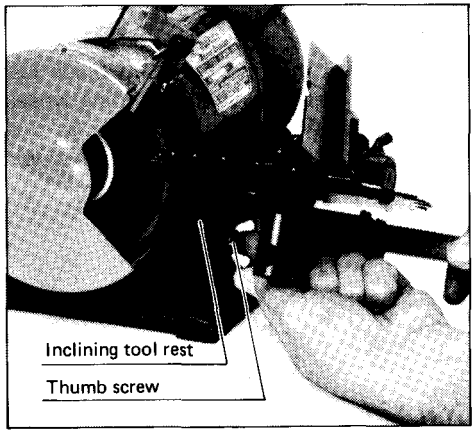
5. Keep a clearance of approximately 2mm (3/32") between the wheel and the blade teeth for turning. Secure thumb screw.
   Next, draw blade up to wheel so that the wheel is well into the tooth gullet. Use adjust screws (B, C) for fixed setting that will assure uniform gullet depth when sharpening.



6. To obtain the original bevel angle or an angle of 15 degrees, release the thumb screw below on the inclining tool rest. Tilt rest to desired angle and secure with thumb screw.

   Now proceed to sharpen blade by grinding every other tooth.

   After sharpening on side, readjust inclining tool rest for the same angle for the opposite-side teeth. Turn blade over after releasing set nut; set blade on blade holder and secure with set nut.



Sharpen the other side of the blade (i.e., every other as yet unsharpened tooth) using the same procedure indicated above.

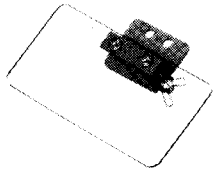
ACCESSORIES

CAUTION:

These accessories or attachments are recommended for use with your Makita tool specified in this manual. The use of any other accessories or attachments might present a risk of injury to persons. The accessories or attachments should be used only in the proper and intended manner.

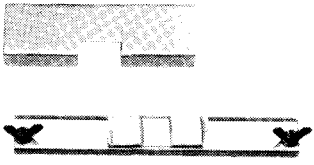
- **Saw blade sharpening kit**
  Part No. 122174-8

- **Eyeshield**
  Part No. 122203-7

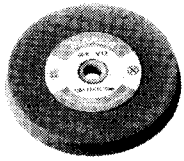


- **Cutter gauge set**
  Part No. 123002-0

- **Planer blade holder set**
  Part No. 123019-3

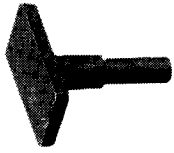


- **Grinding wheels**



Size (mm)	Grit	Part No.
125 (5") x 13 (1/2") x 12.7 (1/2")	WA60K	741004-0
125 (5") x 3.4 (1/8") x 12.7 (1/2")	WA80O	741033-3

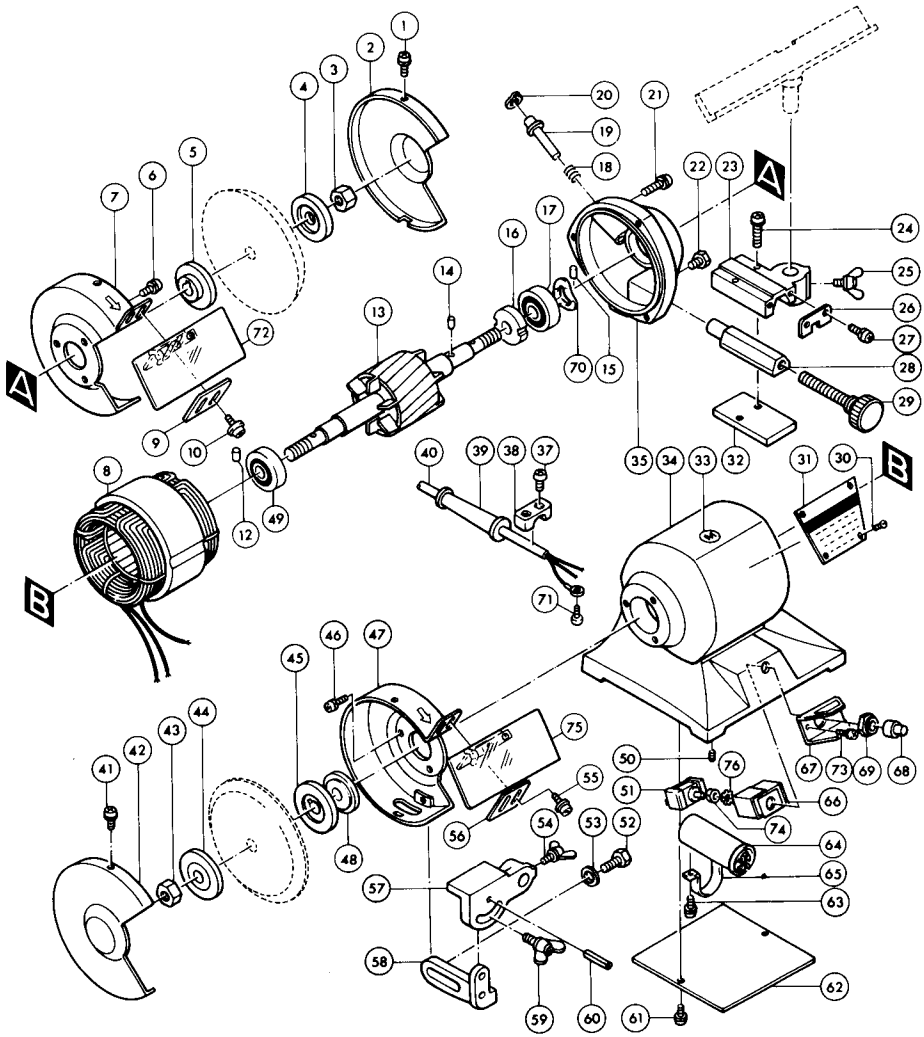
- **Tool rest (C)**
  Part No. 311071-5



- **Sleeve (13)** (For a 5/8" arbor hole)
  Part No. 257517-6

- **Offset wrench (13-21)**
  Part No. 782004-1

125 mm (5")
BENCH GRINDER
Model 9300



Note: The switch and other part configurations may differ from country to country.

ITEM NO.	NO. USED	DESCRIPTION	ITEM NO.	NO. USED	DESCRIPTION
MACHINE			MACHINE		
1	1	P. H. Screw M4x8 (With Washer)	40	1	CORD ASSEMBLY (Assembled Cord, Plug & Cord Guard)
2	1	Side Cover (R)	41	1	P. H. Screw M4x8 (With Washer)
3	1	H. Nut W1/2 – 21 (Right-hand Screw)	42	1	Side Cover (L)
4	1	Outer Flange 50	43	1	H. Nut W1/2 – 21 (Left-hand Screw)
5	1	Inner Flange 50	44	1	Outer Flange 50
6	3	P. H. Screw M5x10 (With Washer)	45	1	Inner Flange 50
7	1	Wheel Cover (R)	46	3	P. H. Screw M5x10 (With Washer)
8	1	Stator	47	1	Wheel Cover (L)
9	1	Adjust Plate (A)	48	1	Collar
10	2	P. H. Screw M6x16 (With Washer)	49	1	Ball Bearing 6202LLB
12	1	Pin 4.5	50	1	(–) S. Screw M5x6
13	1	ROTOR ASSEMBLY (Assembled Items 13, 14, 16, 17 & 49)	51	1	Switch
14	1	Pin 4.5	52	1	H. Bolt M8x20 (With Washer)
15	1	Pin 4.5	53	1	F. Washer 8
16	1	Spindle Lock Bush	54	1	T. Screw M5x15
17	1	Ball Bearing 6202LLB	55	2	P. H. Screw M6x16 (With Washer)
18	1	Compression Spring 7	56	1	Adjust Plate (A)
19	1	Pin 6	57	1	Inclined Tool Rest
20	1	Retaining Ring R–12	58	1	Tool Holder
21	3	P. H. Screw M6x25 (With Washer)	59	1	T. Screw M6x20
22	1	H. Bolt M6x12	60	1	Spring Pin 6–24
23	1	Bracket	61	2	P. H. Screw M4x8 (With Washer)
24	2	P. H. Screw M5x30 (With Washer)	62	1	Under Cover
25	1	T. Screw M6x12	63	2	P. H. Screw M4x8 (With Washer)
26	1	Stop Plate	64	1	Capacitor
27	2	P. H. Screw M4x8 (With Washer)	65	1	Capacitor Clamp
28	1	Rod	66	1	Separator
29	1	Screw M10	67	1	Switch Cover
30	4	Rivet 0–5	68	1	Rubber Cap
31	1	Name Plate	69	1	H. Nut M12
32	1	Slide Plate	70	1	Wave Washer 26
33	1	Makita Label	71	1	P. H. Screw M4x8 (With Washer)
34	1	Motor Housing	72	1	EYE SHIELD ASSEMBLY
35	1	Motor Housing Cover	73	2	P. H. Screw M4x8 (With Washer)
37	2	P. H. Screw M4x18 (With Washer)	74	1	H. Nut M12
38	1	Strain Relief	75	1	EYE SHIELD ASSEMBLY
39	1	Cord Guard	76	1	Toothed Washer 12

Note: The switch and other part specifications may differ from country to country.

アメリカ

MAKITA LIMITED ONE YEAR WARRANTY

Warranty Policy

Every Makita tool is thoroughly inspected and tested before leaving the factory. It is warranted to be free of defects from workmanship and materials for the period of ONE YEAR from the date of original purchase. Should any trouble develop during this one-year period, return the COMPLETE tool, freight prepaid, to one of Makita's Factory or Authorized Service Centers. If inspection shows the trouble is caused by defective workmanship or material, Makita will repair (or at our option, replace) without charge.

This Warranty does not apply where:

- repairs have been made or attempted by others;
- repairs are required because of normal wear and tear;
- The tool has been abused, misused or improperly maintained;
- alterations have been made to the tool.

IN NO EVENT SHALL MAKITA BE LIABLE FOR ANY INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES FROM THE SALE OR USE OF THE PRODUCT. THIS DISCLAIMER APPLIES BOTH DURING AND AFTER THE TERM OF THIS WARRANTY.

MAKITA DISCLAIMS LIABILITY FOR ANY IMPLIED WARRANTIES, INCLUDING IMPLIED WARRANTIES OF "MERCHANTABILITY" AND "FITNESS FOR A SPECIFIC PURPOSE," AFTER THE ONE-YEAR TERM OF THIS WARRANTY.

This Warranty gives you specific legal rights, and you may also have other rights which vary from state to state. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you. Some states do not allow limitation on how long an implied warranty lasts, so the above limitation may not apply to you.

Makita Corporation
3-11-8, Sumiyoshi-cho,
Anjo, Aichi 446 Japan

883078A068

PRINTED IN JAPAN
1991 — 8 — N